

JS HW

Sheet: /PSU/
File: PSU.kicad_sch

Title: CDRC – Custom DRC for Audison AC Link

Size: A4 Date: 2024-08-20

KiCad E.D.A. 8.0.4

Rev: A

Id: 2/5

MCU: ESP32-WROOM-32UE-R2

The schematic diagram illustrates the electrical connections for the ESP32-WROOM-32UE-R2 microcontroller unit (MCU). The central component is U401, labeled "ESP32-WROOM-32UE-R2".

Power Supply:

- VCC is connected to pin 2.
- GND is connected to pin 1.
- A pull-up resistor R401 (10k) connects VCC to the EN pin (pin 3).
- Decoupling capacitors C401 (1uF), C402 (22uF), and C403 (1uF) are connected between VCC and GND.

Reset Circuit:

- A push-button switch J401 (TC2030NL - For UART PROG) provides a RESET signal to pin 6.
- Pins 7 (SWO), 8 (SWCLK), and 9 (SWDIO) are also connected to the button's internal circuitry.
- R403 (330R) is connected between the SWO pin (pin 6) and GND.

UART Connections:

- TXD0/I01 (pin 25) is connected to ESP_TXD0 (pin 4).
- RXD0/I03 (pin 26) is connected to ESP_RXD0 (pin 2).

GPIO Connections:

- SSENSOR_VP (pin 4) and SSENSOR_VN (pin 5) are connected to GPIO36 and GPIO39 respectively.
- DSP_EN (pin 29) is connected to I05 through resistor R403 (330R).
- TP401 is connected to I013.
- TP304 is connected to I025.
- TP306 is connected to I027.
- I032, I033, I034, and I035 are connected to TP306.
- I018, I019, and I021 are connected to I017, I018, and I019 respectively.
- I022, I023, I025, I026, I027, I032, I033, I034, and I035 are connected to I022, I023, I025, I026, I027, I032, I033, I034, and I035 respectively.

LED Connection:

- An LED D401 (LED_Small) is connected between I035 and GND through resistor R402 (330R).

STRAPPING PINS:

- GPIO0: BOOT MODE
- GPIO2: MUST BE FLOATING OR LOW TO ENTER FLASHING MODE
- GPIO6-GPIO11 - INTEGRATED FLASH SPI PINS
- GPIO12: FAILS TO BOOT IF PULLED HIGH
- GPIO14: OUTPUTS PWM ON BOOT
- GPIO15: OUTPUTS PWM ON BOOT & STRAPPING

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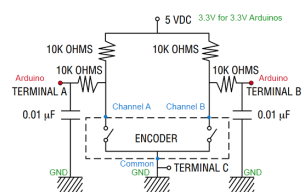
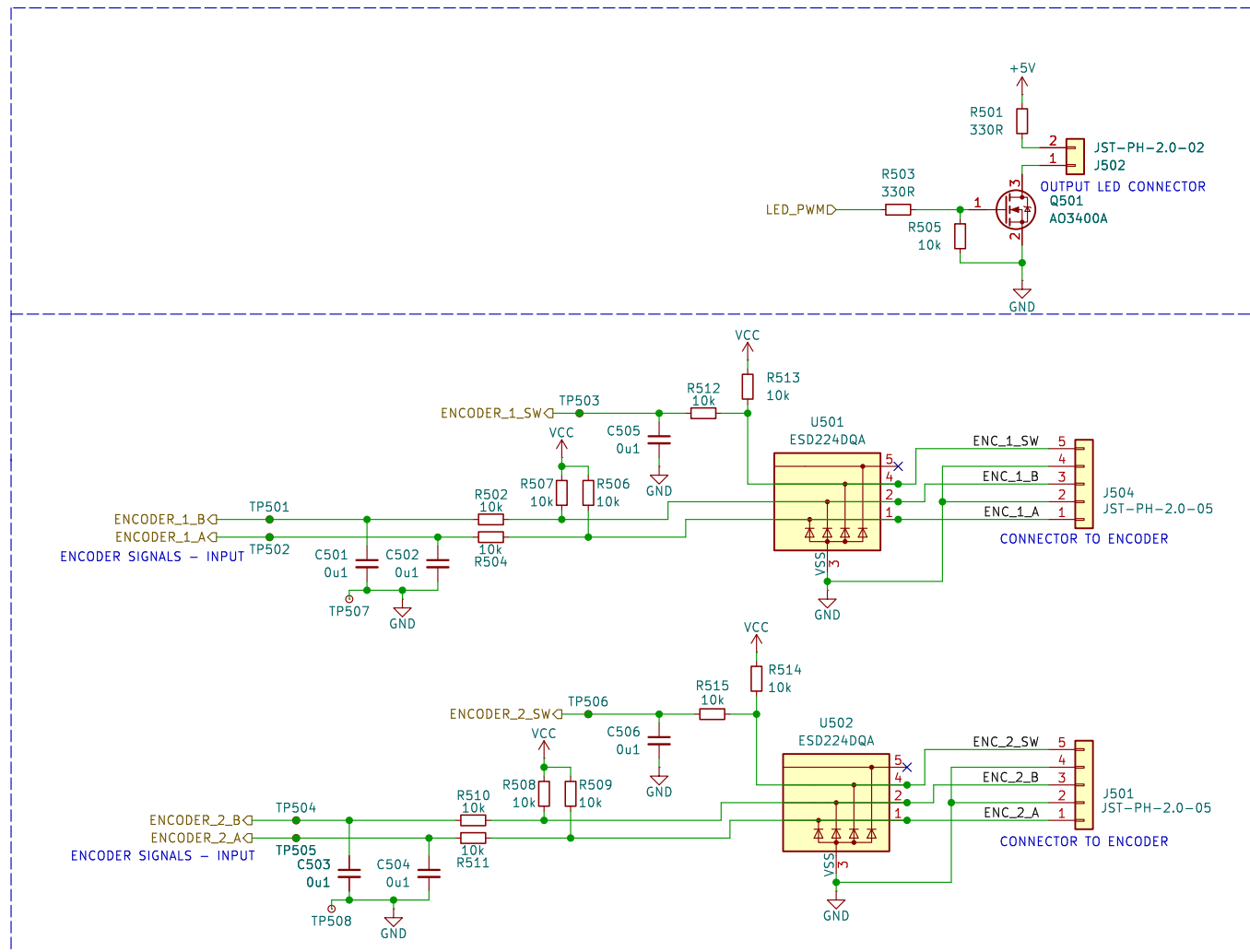
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Sheet: /USER_INTERFACE/
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